WE CLAIM

1. A printhead chip for an ink jet printhead, the printhead chip comprising

a substrate; and

a plurality of nozzle arrangements that are positioned on the substrate, each nozzle arrangement comprising

an active ink ejection structure that is positioned on the substrate and spaced from the substrate, the active ink ejection structure having a roof with an ink ejection port defined in the roof;

a static ink ejection structure positioned on the substrate, the active ink ejection structure and the static ink ejection structure together defining a nozzle chamber in fluid communication with an ink supply, the active ink ejection structure being displaceable with respect to the static ink ejection structure towards and away from the substrate to reduce and increase a volume of the nozzle chamber to eject an ink drop from the nozzle chamber; and

at least two actuators that are operatively arranged with respect to the active ink ejection structure to displace the active ink ejection structure with respect to the static ink ejection structure towards and away from the substrate, the actuators being configured and connected to the active ink ejection structure to impart substantially rectilinear movement to the active ink ejection structure.

2. A printhead chip as claimed in claim 1, which is the product of an integrated circuit fabrication technique.

3. A printhead chip as claimed in claim 2, in which the substrate incorporates CMOS drive circuitry, each actuator being connected to the CMOS drive circuitry.

4. A printhead chip as claimed in claim 1, in which a number of actuators are positioned in a substantially rotationally symmetric manner about the active ink ejection structure.

5. A printhead chip as claimed in claim 4, which includes a pair of substantially identical actuators, one actuator positioned on each of a pair of opposed sides of the active ink ejection structure.

6. A printhead chip as claimed in claim 3, in which the active ink ejection structure includes sidewalls that depend from the roof, the sidewalls being dimensioned to bound the static ink ejection structure.

7. A printhead chip as claimed in claim 6, in which the static ink ejection structure defines an ink displacement formation that is spaced from the substrate and faces the roof of the active ink ejection structure, the ink displacement formation defining an ink displacement area that is dimensioned to facilitate ejection of ink from the ink ejection port, when the active ink ejection structure is displaced towards the substrate.

8. A printhead chip as claimed in claim 7, in which the substrate defines a plurality of ink inlet channels, one ink inlet channel opening into each respective nozzle chamber at an ink inlet opening.

9. A printhead chip as claimed in claim 8, in which the ink inlet channel of each nozzle arrangement opens into the nozzle chamber in substantial alignment with the ink ejection port, the static ink ejection structure being positioned about the ink inlet opening.

10. A printhead chip as claimed in claim 1, in which each actuator is in the form of a thermal bend actuator, each thermal bend actuator being anchored to the substrate at one end and movable with respect to the substrate at an opposed end, and having an actuator arm that bends when differential thermal expansion is set up in the actuator arm, each thermal bend actuator being connected to the CMOS drive circuitry to bend towards the substrate when the thermal bend actuator receives a driving signal from the CMOS drive circuitry.

11. A printhead chip as claimed in claim 10, which includes at least two coupling structures, one coupling structure being positioned intermediate each actuator and the active ink ejection structure, each coupling structure being configured to accommodate both

arcuate movement of said opposed end of each thermal bend actuator and said substantially rectilinear movement of the active ink ejection structure.

12. A printhead chip as claimed in claim 1 in which the active ink ejection member and the passive ink ejection member are shaped so that, when ink is received in the nozzle chamber, the ink ejection members and the ink define a fluidic seal to inhibit ink from leaking out of the nozzle chamber between the ink ejection members.